



AGWAY PETROLEUM CORPORATION, PO BOX 4852, SYRACUSE, NY 13221-4852

December 12, 1995

Mr. Michael W. Young  
Assistant Hazardous Materials Specialist  
Sites Management Section  
State of Vermont  
Department of Environmental Conservation  
West Office Bldg.  
103 South Main Street  
Waterbury, VT 05671-0404

Dear Mr. Young:

RE: Middlesex Facility (Montpelier)  
Your Site #91-1153

Enclosed please find a groundwater sampling and analytical report prepared by Specialized Environmental Monitoring (SEM) for the above-referenced facility.

As requested in your July 10, 1995, letter, we authorized SEM to collect an additional round of groundwater samples from the site. As you review the data in the November 13 SEM report and the enclosed groundwater data summary table, you will note that the BTEX concentrations still persist in MW-1. However, the concentrations are decreasing compared to previous sampling events with comparable groundwater elevations.

Therefore, we respectfully request site closure for this facility. If you wish to discuss the enclosed information and/or any other information to support the site closure decision, please contact me at 315-449-6498.

Thank you in advance for your assistance and cooperation.

Very truly yours,

A handwritten signature in cursive script that reads "Richard D. Williams".

Richard D. Williams, P.E.  
Director, Environmental Quality & Engineering

RDW:dmv  
Enclosure  
cc: J. Scerra - SEM  
W. Anderson  
C. Aimi

**GROUNDWATER SAMPLING &  
ANALYTICAL REPORT**

**AGWAY ENERGY PRODUCTS  
Middlesex Facility  
Middlesex, Vermont**

**Prepared by:**

**SPECIALIZED ENVIRONMENTAL MONITORING  
Wilton, New York**

**Sampling Date:**

**November 8, 1994**

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## **1.0 GROUNDWATER SAMPLING**

A round of groundwater sampling was completed November 8, 1994 at the Agway facility in Middlesex, Vermont. Three monitoring wells (MW-1, 2 and 3) were sampled for EPA 8020 parameters and one well (MW-4) was sampled for EPA 8010 parameters as listed in Table 2. Results are discussed below in Section 3.0.

### **1.1 Groundwater Sampling Procedures**

Prior to actual groundwater sampling for subsequent laboratory analysis, water level measurements were obtained and the volume of water in the well casing was calculated. Water level measurements were obtained using an electric probe (battery powered). This method involves lowering a probe into the well which, upon contact with the water, completes an electric circuit. At the instant the circuit is closed, the tape is held at the measuring point and the depth to water from this point is measured to the nearest 0.01 foot and recorded. Total depths of each well were taken using a weighted tape.

Once the water level was determined, the length of the water column in the well was calculated. This is accomplished by subtracting the depth to water from the measured well depth (calculated from the top of PVC). Next, the length of the water column is multiplied by a conversion factor of 0.163 to determine the number of gallons of water equal to one well volume. The conversion factor of 0.163 is for 2-inch diameter wells. Finally, that value is multiplied by three to determine the volume of water required to evacuate the well of at least three well volumes. After this was completed, approximately four well volumes were purged from each well by using dedicated, clear polyethylene bailers. The clear bailer was lowered into each well (prior to purging) approximately half way into the water column to check for floating product. All four monitoring wells revealed no floating product or sheens on the purge water. (See also attached monitoring well field data sheets.)

## **2.0 QUALITY ASSURANCE/QUALITY CONTROL**

Since no field decontamination was necessary due to the use of dedicated monitoring equipment, no equipment blank was collected.

## **3.0 ANALYTICAL RESULTS**

The groundwater samples were analyzed by Phoenix Environmental Laboratories, Manchester, Connecticut and a copy of the laboratory reporting sheets are attached to this report. Only monitoring well 2 showed any detectable concentrations of BTEX components which were at trace levels (4 ppb). MW-1 and 3 revealed no contamination with all compounds below the detection limits. Monitoring well 4 was sampled for EPA 8010 compounds and all were non-detect (ND) except for tetrachloroethylene which showed a trace level of 2 ppb. This continues to follow historical patterns from previous sampling events.

Table 1  
Well Gauging Data  
Agway Energy Products  
Middlesex Facility  
Middlesex, Vermont  
November 8, 1994

Well No.	Well Casing Elevation (feet)	Depth to Water	Water Table Elevation
MW-1	98.96	12.86	86.10
MW-2	99.92	13.53	86.39
MW-3	98.84	12.69	86.15
MW-4	99.65	13.45	86.20

From: Phoenix Environmental Laboratories Inc.  
587 E. Middle Turnpike, Box 418  
Manchester, Ct. 06045-0418  
(203) 645-1102 Fax 645-0823

November 23, 1994

To: Mr. Jim Buswell  
Agway Energy Products  
P.O. Box 4852  
Syracuse, NY 13221-4852

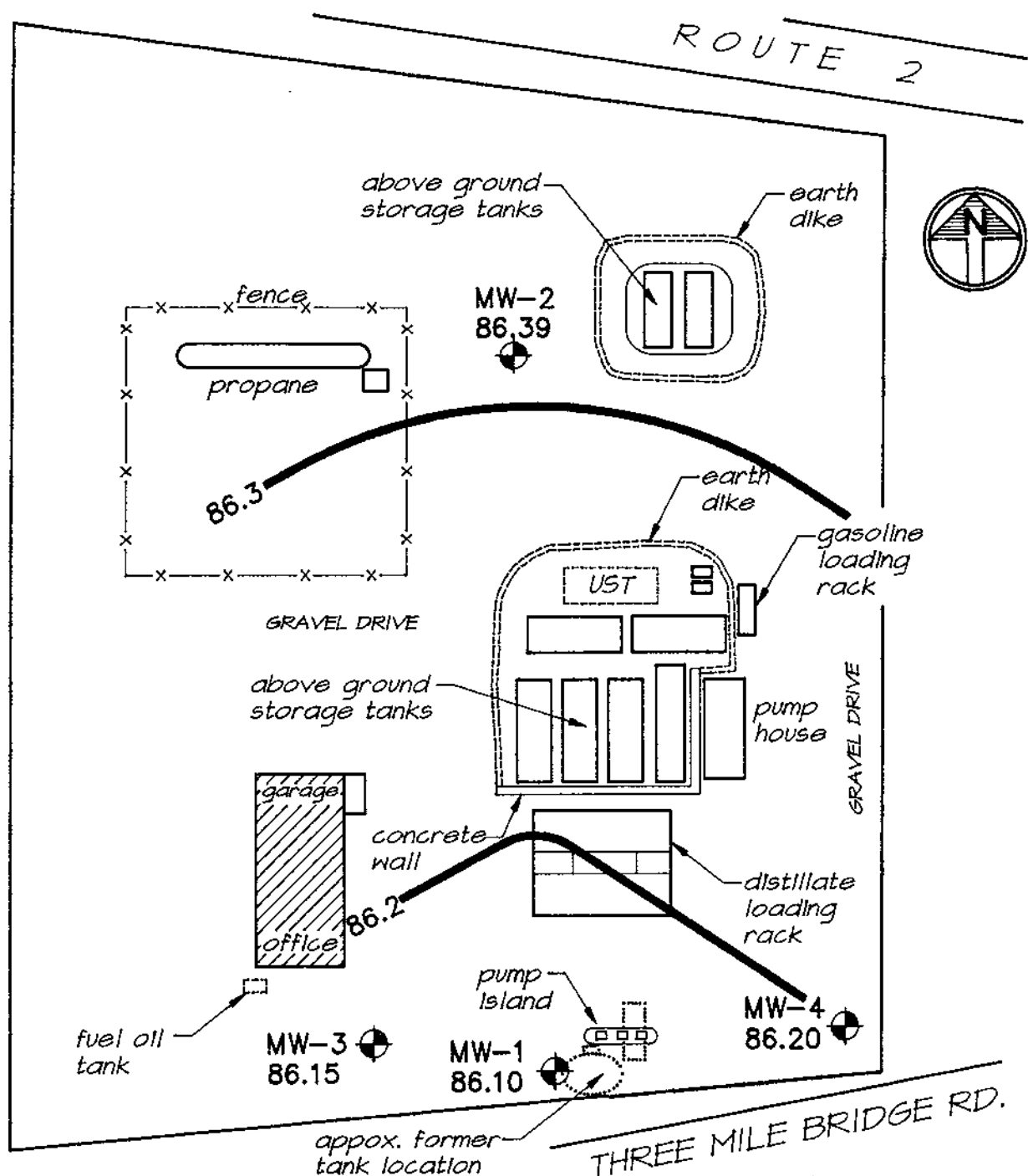
The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AA53126                      Location code: AGWAY  
Purchase order number: 53125QC          Project account code: AA53122-  
Location Description: MIDDLESEX FACILITY QC53122-25  
Sample collector: W-JIM SCERRA  
Sample collection date: 11/08/94      Time: 14:15  
Lab submittal date: 11/11/94          Time: 09:30  
Received by: LC                          Validated by: RJ

Parameter: Volatile (GC) Analysis QC  
Method reference: Phoenix QAQC          Unit:  
Result: see below  
Date started: 11/18/94                  Date finished: 11/18/94  
Time started: 14:38                      Analyst: JW

Data for Volatile (GC) Analysis QC:

Sample Spike	40	QC BLANK ppb	QC Sample Matrix Spike % Rec	QC Sample Matrix Dup Spike % Rec	QC Spike RPD %
Benzene		ND	103	102	1
Bromobenzene		ND			
Bromochloromethane		ND			
Bromodichloromethane		ND			
Bromoform		ND			
Bromoethane		ND			
n-Butylbenzene		ND			
sec-Butylbenzene		ND			
tert-Butylbenzene		ND			
Carbon tetrachloride		ND			
Chlorobenzene		ND	96	99	3
Chloroethane		ND			
Chloroform		ND			
Chloromethane		ND			
2-Chlorotoluene		ND			
4-Chlorotoluene		ND			
Dibromochloromethane		ND			



# **LEGEND:**



MONITORING WELL LOCATION



GROUND WATER CONTOUR

FIGURE 1

**SPECIALIZED  
ENVIRONMENTAL  
MONITORING**

Wilton, New York

**AGWAY ENERGY PRODUCTS**  
Three Mile Bridge Road, Middlesex Vermont  
**WATER TABLE CONTOUR MAP**

November 8, 1994

SCALE: 1" = 60'

**LABORATORY REPORTING SHEETS**



Phoenix Environmental Laboratories Inc.  
587 E. Middle Turnpike, Box 418  
Manchester, Ct. 06045-0418  
(203) 645-1102 Fax 645-0823

To: Mr. Jim Buswell  
Agway Energy Products  
P.O. Box 4852  
Syracuse, NY 13221-4852

Date: November 23, 1994

The following analytical results have been obtained for the indicated sample.

Sample I.D.: AA53122	Received by: LC
Purchase order number:	Validated by: RJ
Project Code:	Location Code: AGWAY
Loc. Desc.: PROJ: MIDDLESEX FACILITY MW-1	
Sample collection date: 11/08/94	Lab submittal date: 11/11/94
Sample collection time: 14:10	Lab submittal time: 09:30
Sample collector: JIM SCERRA	Matrix: Water

Parameter	Result	Units	MDL	Completed	Reference
Aromatic Volatiles	Listed Below	ug/L	1.0	11/18/94 JW	SW 8020

Data For Aromatic Volatiles:

Component Name	Result	Component MDL
Benzene	Not detected	1.0
Chlorobenzene	Not detected	1.0
1,2-Dichlorobenzene	Not detected	1.0
1,3-Dichlorobenzene	Not detected	1.0
1,4-Dichlorobenzene	Not detected	1.0
Ethyl Benzene	Not detected	1.0
Toluene	Not detected	1.0
o-Xylene	Not detected	1.0
p&m-Xylene	Not detected	1.0
% BFB (SURROGATE RECOVERY)	55%	-0-

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

*John M. Schreiber*

John M. Schreiber  
Laboratory Director

Phoenix Environmental Laboratories Inc.  
587 E. Middle Turnpike, Box 418  
Manchester, Ct. 06045-0418  
(203) 645-1102 Fax 645-0823

To: Mr. Jim Buswell  
Agway Energy Products  
P.O. Box 4852  
Syracuse, NY 13221-4852

Date: November 23, 1994

The following analytical results have been obtained for the indicated sample.

Sample I.D.: AA53123	Received by: LC
Purchase order number:	Validated by: RJ
Project Code:	Location Code: AGWAY
Loc. Desc.: PROJ: MIDDLESEX FACILITY MW-2	
Sample collection date: 11/08/94	Lab submittal date: 11/11/94
Sample collection time: 14:25	Lab submittal time: 09:30
Sample collector: JIM SCERRA	Matrix: Water

Parameter	Result	Units	MDL	Completed	Reference
Aromatic Volatiles	Listed Below	ug/L	1.0	11/18/94 JW	SW 8020

Data For Aromatic Volatiles:

Component Name	Result	Component MDL
Benzene	Not detected	1.0
Chlorobenzene	Not detected	1.0
1,2-Dichlorobenzene	Not detected	1.0
1,3-Dichlorobenzene	Not detected	1.0
1,4-Dichlorobenzene	Not detected	1.0
Ethyl Benzene	1	1.0
Toluene	1	1.0
o-Xylene	1	1.0
p&m-Xylene	3	1.0
% BFB (SURROGATE RECOVERY)	72%	-0-

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

*John M. Schreiber*

John M. Schreiber  
Laboratory Director

Phoenix Environmental Laboratories Inc.  
587 E.Middle Turnpike, Box 418  
Manchester, Ct. 06045-0418  
(203) 645-1102 Fax 645-0823

To: Mr. Jim Buswell  
Agway Energy Products  
P.O. Box 4852  
Syracuse, NY 13221-4852

Date: November 23, 1994

The following analytical results have been obtained for the indicated sample.

Sample I.D.: AA53124	Received by: LC
Purchase order number:	Validated by: RJ
Project Code:	Location Code: AGWAY
Loc. Desc.: PROJ: MIDDLESEX FACILITY MW-3	
Sample collection date: 11/08/94	Lab submittal date: 11/11/94
Sample collection time: 14:00	Lab submittal time: 09:30
Sample collector: JIM SCERRA	Matrix: Water

Parameter	Result	Units	MDL	Completed	Reference
Aromatic Volatiles	Listed Below	ug/L	1.0	11/18/94 JW	SW 8020

Data For Aromatic Volatiles:

Component Name	Result	Component MDL
Benzene	Not detected	1.0
Chlorobenzene	Not detected	1.0
1,2-Dichlorobenzene	Not detected	1.0
1,3-Dichlorobenzene	Not detected	1.0
1,4-Dichlorobenzene	Not detected	1.0
Ethyl Benzene	Not detected	1.0
Toluene	Not detected	1.0
o-Xylene	Not detected	1.0
p&m-Xylene	Not detected	1.0
% BFB (SURROGATE RECOVERY)	63%	-0-

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

*John M. Schreiber*

John M. Schreiber  
Laboratory Director

Phoenix Environmental Laboratories Inc.  
587 E.Middle Turnpike, Box 418  
Manchester, Ct. 06045-0418  
(203) 645-1102 Fax 645-0823

To: Mr. Jim Buswell  
Agway Energy Products  
P.O. Box 4852  
Syracuse, NY 13221-4852

Date: November 23, 1994

The following analytical results have been obtained for the indicated sample.

Sample I.D.: AA53125	Received by: LC
Purchase order number:	Validated by: RJ
Project Code:	Location Code: AGWAY
Loc. Desc.: PROJ: MIDDLESEX FACILITY MW-4	
Sample collection date: 11/08/94	Lab submittal date: 11/11/94
Sample collection time: 14:15	Lab submittal time: 09:30
Sample collector: JIM SCERRA	Matrix: Water

Parameter	Result	Units	MDL	Completed	Reference
Halogenated Volatiles	Listed Below	ug/L	1.0	11/18/94 JW	SW 8010

Data For Halogenated Volatiles:

Component Name	Result	Component MDL
Bromobenzene	Not detected	1.0
Bromodichloromethane	Not detected	1.0
Bromoform	Not detected	1.0
Bromomethane	Not detected	1.0
Carbon tetrachloride	Not detected	1.0
Chlorobenzene	Not detected	1.0
Chloroethane	Not detected	1.0
Chloroform	Not detected	1.0
2-Chloroethyl vinyl ether	Not detected	1.0
Chloromethane	Not detected	1.0
Dibromochloromethane	Not detected	1.0
Dibromomethane	Not detected	1.0
1,2-Dichlorobenzene	Not detected	1.0
1,3-Dichlorobenzene	Not detected	1.0
1,4-Dichlorobenzene	Not detected	1.0
Dichlorodifluoromethane	Not detected	1.0
1,1-Dichloroethane	Not detected	1.0
1,2-Dichloroethane	Not detected	1.0
1,1-Dichloroethene	Not detected	1.0
cis-1,2-Dichloroethene	Not detected	1.0
trans-1,2-Dichloroethene	Not detected	1.0
1,2-Dichloropropane	Not detected	1.0
trans-1,3-Dichloropropene	Not detected	1.0

Mr. Jim Buswell Sample ID: AA53125

Page 2

Data For Halogenated Volatiles:

Component Name	Result	Component MDL
Methylene chloride	Not detected	1.0
1,1,1,2-Tetrachloroethane	Not detected	1.0
1,1,2,2-Tetrachloroethane	Not detected	1.0
Tetrachloroethylene	2	1.0
1,1,1-Trichloroethane	Not detected	1.0
1,1,2-Trichloroethane	Not detected	1.0
Trichloroethylene	Not detected	1.0
Trichlorofluoromethane	Not detected	1.0
1,2,3-Trichloropropane	Not detected	1.0
Vinyl chloride	Not detected	1.0
cis-1,3-Dichloropropene	Not detected	1.0
% BFB (Surrogate Recovery)	93%	-0-

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

*John M. Schreiber*

John M. Schreiber  
Laboratory Director

From: Phoenix Environmental Laboratories Inc.  
587 E. Middle Turnpike, Box 418  
Manchester, Ct. 06045-0418  
(203) 645-1102 Fax 645-0823

November 23, 1994

To: Mr. Jim Buswell  
Agway Energy Products  
P.O. Box 4852  
Syracuse, NY 13221-4852

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AA53126                      Location code: AGWAY  
Purchase order number: 53125QC          Project account code: AA53122-  
Location Description: MIDDLESEX FACILITY QC53122-25  
Sample collector: W-JIM SCERRA  
Sample collection date: 11/08/94      Time: 14:15  
Lab submittal date: 11/11/94          Time: 09:30  
Received by: LC                          Validated by: RJ

Parameter: Volatile (GC) Analysis QC  
Method reference: Phoenix QAQC          Unit:  
Result: see below  
Date started: 11/18/94                  Date finished: 11/18/94  
Time started: 14:38                      Analyst: JW

Data for Volatile (GC) Analysis QC:

Sample Spike	40	QC BLANK ppb	QC Sample Matrix Spike % Rec	QC Sample Matrix Dup Spike % Rec	QC Spike RPD %
Benzene		ND	103	102	1
Bromobenzene		ND			
Bromochloromethane		ND			
Bromodichloromethane		ND			
Bromoform		ND			
Bromoethane		ND			
n-Butylbenzene		ND			
sec-Butylbenzene		ND			
tert-Butylbenzene		ND			
Carbon tetrachloride		ND			
Chlorobenzene		ND	96	99	3
Chloroethane		ND			
Chloroform		ND			
Chloromethane		ND			
2-Chlorotoluene		ND			
4-Chlorotoluene		ND			
Dibromochloromethane		ND			

Data for Volatile (GC) Analysis QC (continued):

12Dibromo3chloroprop.	ND			
1,2-Dibromoethane.	ND			
Dibromomethane	ND			
1,2-Dichlorobenzene	ND			
1,3-Dichlorobenzene	ND			
1,4-Dichlorobenzene	ND			
Dichlorodifluorometh.	ND			
1,1-Dichloroethane	ND	98	100	2
1,2-Dichloroethane	ND	98	108	9
1,1-Dichloroethylene	ND			
c-1,2-Dichloroethene	ND			
t-1,2-Dichloroethene	ND			
1,2-Dichloropropane	ND			
1,3-Dichloropropane	ND			
2,2-Dichloropropane	ND			
1,1-Dichloropropane	ND			
Ethylbenzene	ND	101	102	1
Hexachlorobutadiene	ND			
Isopropylbenzene	ND			
p-Isopropyltoluene	ND			
Methylene Chloride	trace			
Naphthalene	ND			
n-propylbenzene	ND			
Styrene	ND			
1112Tetrachloroethane	ND			
1122Tetrachloroethane	ND			
Tetrachloroethylene	ND	104	108	4
Toluene	ND	102	102	<1
123-Trichlorobenzene	ND			
124-Trichlorobenzene	ND			
111-Trichloroethane	ND	107	112	4
112-Trichloroethane	ND			
Trichloroethylene	ND	113	120	7
Trichlorofluorometh.	ND			
123-Trichloropropane	ND			
124-Trimethylbenzene	ND			
135-Trimethylbenzene	ND			
Vinyl Chloride	ND			
o-Xylene	ND			
m-Xylene	ND			
p-Xylene	ND			
c-1,2-Dichloropropene	ND			
t-1,2-Dichloropropene	ND			
Methyl-t-butyl ether	ND	83	92	9

### CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 418, Manchester, CT 06040  
Tel. (203) 645-1102 Fax (203) 645-0823

DATE RCVD: \_\_\_\_\_

Customer: Agway Energy Products  
Address: P.O. Box 4933  
Syracuse, NY 13221-4933

Project: Middlesex facility  
Report To: Jim Buswell / Jim Scarra  
Invoice To: Jim Buswell

Project P.O. \_\_\_\_\_  
Phone #: 315 449-7430  
Fax #: 315 449-7362

[illegible]



## **MONITORING WELL FIELD DATA SHEETS**

# SPECIALIZED ENVIRONMENTAL MONITORING

## Monitoring Well Field Data Sheet

Project: Agway & Middlesex  
Vermont

Date: November 8, 1994

Well No.: MW-1

Total depth: 14.70 ft. (top of PVC S Steel/Casing/Ground)

Depth to water: 12.86 ft. (top of PVC S Steel/Casing)

Height of column: 1.84 ft. Well diameter: 2 in.

1 volume = 0.3 gal.

3 volumes = 0.9 gal.

### PURGING DATA

Date: 11-8-94

Start: 1335

Method: Dedicated poly Bailers

End: 1345

Total Gal. Removed: 2 gal

Description:

high turb. brown with odor - no  
sheen

### SAMPLING DATA

Date: 11-8-94

Sample Time: 1410

Method: poly Bailer

Parameters: EPA 8020

G.W. Temp.: \_\_\_\_\_ °C pH \_\_\_\_\_ ORP \_\_\_\_\_

Conductivity: \_\_\_\_\_ Other: \_\_\_\_\_

# SPECIALIZED ENVIRONMENTAL MONITORING

## Monitoring Well Field Data Sheet

Project: Agway @ Middlesex  
Vermont

Date: November 8, 1994

Well No.: MW-2

Total depth: 14.50 ft. (top of PVC S Steel/Casing/Ground)

Depth to water: 13.53 ft. (top of PVC S Steel/Casing)

Height of column: 0.97 ft. Well diameter: 2 in.

1 volume = 0.2 gal.

3 volumes = 0.5 gal.

### PURGING DATA

Date: 11-8-94

Start: 1300

Method: dedicated poly bailer

End: 1310

Total Gal. Removed: ≈ .5 gal

Description:

very high turbid brown - no odor or sheen.

### SAMPLING DATA

Date: 11-8-94

Sample Time: 1425

Method: Poly Bailer

Parameters: EPA 8020

G.W. Temp.: \_\_\_\_\_ °C pH \_\_\_\_\_ ORP \_\_\_\_\_

Conductivity: \_\_\_\_\_ Other: \_\_\_\_\_

# SPECIALIZED ENVIRONMENTAL MONITORING

## Monitoring Well Field Data Sheet

Project: Agway Middlesex  
Vermont

Date: November 8, 1994

Well No.: MW-3

Total depth: 14.40 ft. (top of: PVC / S Steel / Casing / Ground)

Depth to water: 12.69 ft. (top of: PVC / S Steel / Casing)

Height of column: 1.71 ft. Well diameter: 2 in.

1 volume = 0.3 gal.

3 volumes = 0.8 gal.

### PURGING DATA

Date: 11-8-94

Start: 1320

Method: dedicated poly Bailer

End: 1330

Total Gal. Removed: 1.5 gal

Description:

high turbid brown - no odor or sheen

### SAMPLING DATA

Date: 11-8-94

Sample Time: 1400 Method: Poly Bailer

Parameters: EPA 8020

G.W. Temp.: \_\_\_\_\_ °C pH \_\_\_\_\_ ORP \_\_\_\_\_

Conductivity: \_\_\_\_\_ Other: \_\_\_\_\_

# SPECIALIZED ENVIRONMENTAL MONITORING

## Monitoring Well Field Data Sheet

Project: Agway @ Middlesex  
Vermont

Date: November 8, 1994

Well No.: MW-4

Total depth: 14.25 ft. (top of PVC S Steel/Casing/Ground)

Depth to water: 13.45 ft. (top of PVC S Steel/Casing)

Height of column: 0.8 ft. Well diameter: 2 in.

1 volume = .13 gal.

3 volumes = 0.4 gal.

### PURGING DATA

Date: 11-8-94

Start: 1240

Method: dedicated poly bailer

End: 1255

Total Gal. Removed: ± .5 gal

Description:

high turbid brown with silt and sand  
no odor sheep.

### SAMPLING DATA

Date: 11-8-94

Sample Time: 1415 Method: Bailer

Parameters: EPA 8010 - (split sample taken by State of Vermont)

G.W. Temp.: \_\_\_\_\_ °C pH \_\_\_\_\_ ORP \_\_\_\_\_

Conductivity: \_\_\_\_\_ Other: \_\_\_\_\_